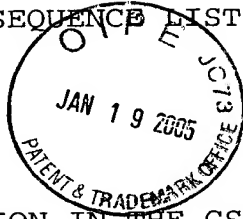


SEQUENCE LISTING



<110> CLARK, Susan J.
MILLER, Douglas S.
MOLLOY, Peter L.

<120> ASSAY FOR METHYLATION IN THE GST-Pi Gene

<130> Q61152

<140> US 09/673,448

<141> 2000-11-27

<150> PCT/AU99/00306

<151> 1999-04-23

<150> PP 3129

<151> 1998-04-23

<160> 60

<170> PatentIn version 3.3

<210> 1

<211> 29

<212> DNA

<213> Homosapiens

<400> 1

cgcgagggttt tcgttggagt ttcgtcgtc

29

<210> 2

<211> 25

<212> DNA

<213> Homo sapiens

<400> 2

cgttattagt gactacgcgc ggttc

25

<210> 3

<211> 24

<212> DNA

<213> Homo sapiens

<400> 3
yggtttttagg gaattttttt tcgc. 24

<210> 4
<211> 28
<212> DNA
<213> Homo sapiens

<400> 4
ygggygygta gtttggtgyg tatatttc 28

<210> 5
<211> 29
<212> DNA
<213> Homo sapiens

<400> 5
gggaattttt tttcgcgatg tttyggcgc 29

<210> 6
<211> 24
<212> DNA
<213> Homo sapiens

<400> 6
tttttagggg gtttyggagcg tttc 24

<210> 7
<211> 19
<212> DNA
<213> Homo sapiens

<400> 7
ggtaggttgy gtttatcgc 19

<210> 8
<211> 27
<212> DNA
<213> Homosapiens

<400> 8

aaaaattcra atctctccga ataaacg 27

<210> 9
<211> 27
<212> DNA
<213> Homosapiens

<400> 9
aaaaaccraa ataaaaacca cacgacg 27

<210> 10
<211> 25
<212> DNA
<213> Homo sapiens

<400> 10
tcccatccct ccccgaaacg ctccg 25

<210> 11
<211> 33
<212> DNA
<213> Homosapiens

<400> 11
gaaacgctcc gaacccccta aaaaccgcta acg 33

<210> 12
<211> 27
<212> DNA
<213> Homo sapiens

<400> 12
crrcctaataa tccccraaat crccgcg 27

<210> 13
<211> 30
<212> DNA
<213> Homo sapiens

<400> 13
accccracra ccrctacacc ccraacgtcg 30

<210> 14
 <211> 31
 <212> DNA
 <213> Homo sapiens

 <400> 14
 ctcttctaaa aaatcccr cr aactcccgcc g 31

<210> 15
 <211> 29
 <212> DNA
 <213> Homo sapiens

 <400> 15
 aaaacrcct aaaatccccg aaatcgccg 29

<210> 16
 <211> 30
 <212> DNA
 <213> Homo sapiens

 <400> 16
 aactcccrcc gacccaacc ccgacgaccg 30

<210> 17
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligo which binds bisulfite-converted human GST-Pi gene

<400> 17
 aaacctaataa aataaataaa caa 23

<210> 18
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Oligo whcih binds non-converted human GST-Pi gene

 <400> 18
 gggcctaggg agtaaacaga cag 23

 <210> 19
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligo which binds human GST-Pi gene

 <400> 19
 cctttccctc tttcccarrt cccca 25

 <210> 20
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligo which binds bisulfite-converted human GST-Pi gene

 <400> 20
 tttggtattt tttttcgggt tttag 25

 <210> 21
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Oligo which binds non-converted human GST-Pi gene

 <400> 21
 cttggcatcc tcccccgggc tccag 25

 <210> 22
 <211> 26
 <212> DNA

<213> Artificial Sequence

<220>

<223> Oligo which binds human GST-Pi gene

<400> 22

ggyaggggaag ggaggyaggg gytggg

26

<210> 23

<211> 31

<212> DNA

<213> Homo sapiens

<400> 23

ttatgtaata aatttgtata ttttgtatat g

31

<210> 24

<211> 25

<212> DNA

<213> Homo sapiens

<400> 24

tgtagattat ttaaggtag gagtt

25

<210> 25

<211> 27

<212> DNA

<213> Homo sapiens

<400> 25

aaacctaataa aataaacaaa caacaaa

27

<210> 26

<211> 29

<212> DNA

<213> Homosapiens

<400> 26

aaaaaacctt tccctctttc ccaaattccc

29

<210> 27

<211> 27
 <212> DNA
 <213> Homo sapiens

 <400> 27
 tttgttggtt gtttattttt taggttt 27

 <210> 28
 <211> 26
 <212> DNA
 <213> Homo sapiens

 <400> 28
 gggatttggg aaagagggaa aggttt 26

 <210> 29
 <211> 24
 <212> DNA
 <213> Homosapiens

 <400> 29
 actaaaaact ctaaacccca tccc 24

 <210> 30
 <211> 24
 <212> DNA
 <213> Homo sapiens

 <400> 30
 aacctaatac taccttaacc ccat 24

 <210> 31
 <211> 33
 <212> DNA
 <213> Homo sapiens

 <400> 31
 aatcctcttc ctactatcta ttactccct aaa 33

 <210> 32
 <211> 29

<212> DNA
 <213> Homo sapiens

 <400> 32
 aaaacctaataa aaaaaaaaaa aaacttccc 29

 <210> 33
 <211> 29
 <212> DNA
 <213> Homo sapiens

 <400> 33
 ttggttttat gttgggagtt ttgagtttt 29

 <210> 34
 <211> 29
 <212> DNA
 <213> Homo sapiens

 <400> 34
 ttttgtgggg agttgggggt tgatgttgt 29

 <210> 35
 <211> 29
 <212> DNA
 <213> Homo sapiens

 <400> 35
 ggtttagagt ttttagtatg gggttaatt 29

 <210> 36
 <211> 20
 <212> DNA
 <213> Homo sapiens

 <400> 36
 tagtattagg ttagggtttt 20

 <210> 37
 <211> 29
 <212> DNA

<213> Homo sapiens
 <400> 37
 aactctaacc ctaatctacc aacaacata 29

<210> 38
 <211> 29
 <212> DNA
 <213> Homo sapiens

<400> 38
 caaaaaactt taaataaacc ctcctacca 29

<210> 39
 <211> 32
 <212> DNA
 <213> Homo sapiens

<400> 39
 gttttgtggt taggttgttt tttaggtggt ag 32

<210> 40
 <211> 30
 <212> DNA
 <213> Homo sapiens

<400> 40
 gttttgagta tttggtgtgt ggtagttttt 30

<210> 41
 <211> 30
 <212> DNA
 <213> Homo sapiens

<400> 41
 ttaatatataa taaaaaaaaat atatttacaa 30

<210> 42
 <211> 34
 <212> DNA
 <213> Homo sapiens

<400> 42	
caacccccaa tacccaaccc taatacaaactc	34
<210> 43	
<211> 26	
<212> DNA	
<213> Homo sapiens	
<400> 43	
ggtttttagtt tttggttggtt tggatg	26
<210> 44	
<211> 26	
<212> DNA	
<213> Homo sapiens	
<400> 44	
tttttttgggt ttttagtatat gtggggg	26
<210> 45	
<211> 30	
<212> DNA	
<213> Homosapiens	
<400> 45	
ataactaaaa aactatttttc taatcctcta	30
<210> 46	
<211> 29	
<212> DNA	
<213> Homosapiens	
<400> 46	
ccaaactaaa aactccaaaa aaccactaa	29
<210> 47	
<211> 38	
<212> DNA	
<213> Artificial Sequence	

<220>
 <223> M13-human GST-Pi oligonucleotide

 <400> 47
 tgtaaaacga cggccagtgg gatttgggaa agagggaa 38

 <210> 48
 <211> 38
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> M13-human GST-Pi oligonucleotide

 <400> 48
 tgtaaaacga cggccagttg ttgggagttt tgagtttt 38

 <210> 49
 <211> 31
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> M13-human GST-Pi oligonucleotide

 <400> 49
 tgtaaaacga cggccagtta gtattaggtt a 31

 <210> 50
 <211> 37
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> M13-human GST-Pi oligonucleotide

 <400> 50
 tgtaaaacga cggccagtgt tttgagtatt tgttgtg 37

 <210> 51
 <211> 35
 <212> DNA

<213> Artificial Sequence

<220>

<223> M13-human GST-Pi oligonucleotide

<400> 51

tgtaaaacga cggccagtgt ttttagtata tgtgg

35

<210> 52

<211> 499

<212> DNA

<213> Homo sapiens

<400> 52

tgcagatcac ctaagggtcag gagttcgaga ccagcccggc caacatggtg aaaccccgtc	60
tctactaaaa atacaaaaat cagccagatg tggcacgcac ctataattcc acctactcgg	120
gaggctgaag cagaattgct tgaacccgag aggcggaggt tgcagtgagc cgccgagatc	180
gcgccactgc actccagcct gggccacagc gtgagactac gtcataaaat aaaataaaat	240
aacacaaaaat aaaataaaat aaaataaaat aaaataaaat aataaaaataa aataaaaataa	300
aataaaaataa aataaaaataa agcaatttcc tttcctctaa gcggcctcca cccctctccc	360
ctgccctgtg aagcgggtgt gcaagctccg ggatcgcagc ggtcttaggg aatttccccc	420
cgcgatgtcc cggcgcgcca gttcgctgcg cacacttcgc tgcggtcctc ttcctgctgt	480
ctgtttactc cctaggccc	499

<210> 53

<211> 316

<212> DNA

<213> Homo sapiens

<400> 53

gggacctggg aaagagggaa aggcttcccc ggccagctgc gcggcgactc cggggactcc	60
agggcgcccc tctgcggccg acgcccgggg tgcagcggcc gccggggctg gggccggcgg	120
gagtccgcgg gaccctccag aagagcggcc ggcgccgtga ctcagcactg gggcggagcg	180

gggcgggacc acccttataa ggctcggagg ccgcgaggcc ttcgctggag tttegcgcgc	240
gcagtcttcg ccaccagtga gtacgcgcgg ccgcgctccc cggggatggg gctcagagct	300
cccagcatgg ggccaa	316

<210> 54
 <211> 603
 <212> DNA
 <213> Homo sapiens

<400> 54	
cagcatcagg cccgggctcc cggcagggt cctcgcccac ctcgagaccc gggacggggg	60
cctaggggac ccaggacgtc cccagtgccg ttagcggctt tcagggggcc cggagcgcct	120
cggggaggga tgggaccccg ggggcgggga gggggggcag gctgcgctca ccgcgccttg	180
gcatectccc ccgggctcca gcaaactttt ctttgttcgc tgcagtgccg ccctacaccg	240
tggtctatth cccagttcga ggtaggagca tgtgtctggc aggaaggga ggcaggggt	300
ggggctgcag cccacagccc ctcgcccacc cggagagatc cgaaccccct tatccctccg	360
tcgtgtggct tttaaccceg gcctccttec tgttccccgc ctctcccgcc atgcctgctc	420
cccgccccag tgttgtgtga aatcttcgga ggaacctgtt tacctgttec ctccctgcac	480
tcctgacccc tccccgggtt gctgcgaggc ggagtcggcc cggteccccc atctcgtact	540
tctccctccc cgcaggccgc tgcgcggccc tgcgcatgct gctggcagat cagggccaga	600
gct	603

<210> 55
 <211> 266
 <212> DNA
 <213> Homo sapiens

<400> 55	
gctctgagca cctgctgtgt ggcagtctct catccttcca cgcacatcct cttccccctcc	60
tcccaggctg gggetcacag acagccccct gggtggccca tcccagtgat ctgtgtgttg	120

atcaggcgcc cagtcacgcg gcctgctccc ctccacccaa ccccagggct ctatgggaag	180
gaccagcagg aggcagccct ggtggacatg gtgaatgacg gcgtggagga cctccgctgc	240
aaatacatct cctcatcta caccaa	266

<210> 56
 <211> 287
 <212> DNA
 <213> Homo sapiens

<400> 56	
tccccctgct ctcagcatat gtggggcgcc tcagtgcccg gcccaagctc aaggccttcc	60
tggcctcccc tgagtacgtg aacctcccca tcaatggcaa cgggaaacag tgagggttgg	120
ggggactctg agcgggaggc agagtttgcc ttcctttctc caggaccaat aaaatttcta	180
agagagctac tatgagcact gtgtttcctg ggacggggct taggggttct cagcctcgag	240
gtcgggtggga gggcagagca gaggactaga aaacagctcc tccagca	287

<210> 57
 <211> 524
 <212> DNA
 <213> Homo sapiens

<400> 57	
ataaaataaaa ataaaataaaa ataaagcaat ttcctttcct ctaagcggcc tccaccctc	60
tccccctgcc tgtgaagcgg gtgtgcaagc tccgggatcg cagcgggtctt aggggaatttc	120
cccccgcgat gtccccggcg gccagttcgc tgcgcacact tcgctgcggt cctcttcctg	180
ctgtctgttt actccctagg ccccgctggg gacctgggaa agaggggaaag gcttccccgg	240
ccagctgcgc ggcgactccg gggactccag ggcgcccctc tgcggccgac gcccggggtg	300
cagcggccgc cggggctggg gccggcgggga gtccgcggga ccctccagaa gagcggccgg	360
cgccgtgact cagcactggg gcggagcggg gcgggaccac ccttataagg ctcgagggcc	420
gcgaggcctt cgctggagtt tcgccgccgc agtcttcgcc accagtgagt acgcgcggcc	480

cgcggtccccg gggatggggc tcagagctcc cagcatgggg ccaa 524

<210> 58
<211> 524
<212> DNA
<213> Homo sapiens

<400> 58
ataaaataaa ataaaataaa ataaagtaat tttttttttt ttaagtgggt tttatttttt 60
ttttttgttt tgtgaagtgg gtgtgtaagt tttgggattg tagtggtttt aggggaatttt 120
tttttgtgat gttttggtgt gttagtttgt tgtgtatatatt ttgttgtgggt tttttttttg 180
ttgtttgttt attttttagg ttttgttggg gatttgggaa agagggaaag gttttttttg 240
ttagttgtgt ggtgattttg gggatttttag ggtgtttttt tgtggttgat gtttgggggtg 300
tagtggttgt tgggggttggg gttggtggga gtttgtggga ttttttagaa gagtgggttg 360
tgttgtgatt tagtattggg gtggagtggg gtgggattat ttttataagg tttggaggtt 420
gtgaggtttt tgttggaggt ttgttggtgt agtttttggt attagtgagt atgtgtgggt 480
tgtgtttttg gggatggggg ttagagtttt tagtatgggg ttaa 524

<210> 59
<211> 524
<212> DNA
<213> Homo sapiens

<400> 59
ataaaataaa ataaaataaa ataaagtaat tttttttttt ttaagcgggt tttatttttt 60
ttttttgttt tgtgaagcgg gtgtgtaagt ttcgggatcg tagcggtttt aggggaatttt 120
ttttcgcgat gtttcggcgc gttagttcgt tgcgtatatatt tcgttgcgggt tttttttttg 180
ttgtttgttt attttttagg tttcgttggg gatttgggaa agagggaaag gtttttttcgg 240
ttagttgcgc ggcgatttcg gggatttttag ggcgtttttt tgcggtcgac gttcgggggtg 300
tagcggtcgt cgggggttggg gtcggcggga gttcgcggga ttttttagaa gagcggtcgg 360

cgctcgtgatt tagtattggg gcggagcggg gcgggattat ttttataagg ttcggagggtc	420
gcgagggtttt cgttggagtt tcgtcgtcgt agtttttcgtt attagtgagt acgcgcgggtt	480
cgcgtttttcg gggatgggggt ttagagtttt tagtatgggg ttaa	524

<210> 60
 <211> 4262
 <212> DNA
 <213> Homo sapiens

<400> 60	
aacaagagat caatatctag aataaatgga gatctgcaaa tcaacagaaa gtaggcagca	60
aagccaaaga aaatagccta aggcacagcc actaaaagga acgtgatcat gtcctttgca	120
gggacatggg tggagctgga agccgtttagc ctcagcaaac tcacacagga acagaaaacc	180
agcgagaccg catggtctca cttataagtg ggagctgaac aatgagaaca catgggtcaca	240
tggcggcgat caacacacac tggtgccctgt tgagcgggggt gctggggagg gagagtacca	300
ggaagaatag ctaagggata ctgggcttaa tacctgggtg atgggatgat ctgtacagca	360
aaccatcatg gcgcacacac ctatgtaaca aacctgcaca tcctgcacat gtaccccaga	420
acttcaaata aaagttggac ggccaggcgt ggtggctcac gcctgtaatc ccagcacttt	480
gggaagccga ggcgtgcaga tcacctaagg tcaggagttc gagaccagcc cggccaacat	540
ggtgaaaccc cgtctctact aaaaatacaa aaatcagcca gatgtggcac gcacctataa	600
ttccacctac tcgggagggt gaagcagaat tgcttgaacc cgagaggcgg aggttgcagt	660
gagccgccga gatcgcgcca ctgcactcca gcctgggcca cagcgtgaga ctacgtcata	720
aaataaaata aaataacaca aaataaaata aaataaaata aaataaaata aaataataaa	780
ataaaataaa ataaaataaa ataaaataaa ataaagcaat ttcctttcct ctaagcggcc	840
tccaccctc tcccctgccc tgtgaagcgg gtgtgcaagc tccgggatcg cagcgtcttt	900
agggaaatttc cccccgcgat gtcccggcgc gccagttcgc tgcgcacact tcgctgcggt	960
cctcttctcgt ctgtctgttt actccctagg ccccgctggg gacctgggaa agaggggaaag	1020

gcttccccgg	ccagctgcgc	ggcgactccg	gggactccag	ggcgcccctc	tgcgggccgac	1080
gccccggggtg	cagcgggccgc	cggggctggg	gccggcgggga	gtccgcggga	ccctccagaa	1140
gagcgggccgg	cgccgtgact	cagcactggg	gcggagcggg	gcgggaccac	ccttataagg	1200
ctcgagggcc	gcgaggcctt	cgctggagtt	tcgccgccgc	agtcttcgcc	accagtgagt	1260
acgcgcgggc	cgcgtccccg	gggatggggc	tcagagctcc	cagcatgggg	ccaacccgca	1320
gcatcaggcc	cgggctcccc	gcagggctcc	tcgcccacct	cgagaccg	gacggggggcc	1380
taggggaccc	aggacgtccc	cagtgccgtt	agcggctttc	agggggcccc	gagcgcctcg	1440
gggaggggatg	ggacccccggg	ggcggggagg	gggggcaggc	tgcgctcacc	gcgccttggc	1500
atcctcccc	gggctccagc	aaacttttct	ttgttcgctg	cagtgccgcc	ctacaccgtg	1560
gtctatttcc	cagttcgagg	taggagcatg	tgtctggcag	ggaaggagg	caggggctgg	1620
ggctgcagcc	cacagcccct	cgcccacccg	gagagatccg	aaccccccta	tccctccgtc	1680
gtgtggcttt	taccccgggc	ctccttctg	ttccccgcct	ctcccgccat	gcctgctccc	1740
cgccccagtg	ttgtgtgaaa	tcttcggagg	aacctgttta	cctgttccct	ccctgcactc	1800
ctgaccctc	cccgggttgc	tgcgaggcgg	agtcggcccg	gtcccacat	ctcgacttc	1860
tccctccccg	caggccgctg	cgcggcctg	cgcatgctgc	tggcagatca	gggccagagc	1920
tggaaggagg	aggtggtgac	cgtggagacg	tggcaggagg	gctcactcaa	agcctcctgc	1980
gtaagtgacc	atgcccgggc	aaggggaggg	ggtgctgggc	cttagggggc	tgtgactagg	2040
atcgggggac	gccaagctc	agtgcctc	cctgagccat	gcctccccca	acagctatac	2100
gggcagctcc	ccaagttcca	ggacggagac	ctcaccctgt	accagtccaa	taccatcctg	2160
cgtcacctgg	gccgcaccct	tggtgagtct	tgaacctcca	agtccagggc	aggcatgggc	2220
aagcctctgc	ccccggagcc	cttttgttta	aatcagctgc	cccgcagccc	tctggagtgg	2280
aggaaactga	gaccactga	ggttacgtag	tttgcccaag	gtcaagcctg	ggtgcctgca	2340
atccttgccc	tgtgccaggc	tgctcccag	gtgtcaggtg	agctctgagc	acctgctgtg	2400

tggcagtctc	tcatccttcc	acgcacatcc	tcttcccctc	ctcccaggct	ggggctcaca	2460
gacagccccc	tggttggccc	atccccagtg	actgtgtgtt	gatcaggcgc	ccagtcacgc	2520
ggcctgctcc	cctccaccca	accccagggc	tctatgggaa	ggaccagcag	gaggcagccc	2580
tggtggacat	ggtgaatgac	ggcgtggagg	acctccgctg	caaatacatc	tccctcatct	2640
acaccaacta	tgtgagcatc	tgcaccaggg	ttgggcactg	ggggctgaac	aaagaaaggg	2700
gcttcttgtg	ccctcacccc	ccttaccctt	caggtggctt	gggctgacct	cttcttgggt	2760
caggggtgcag	gggctgggtc	agctctgggc	caggggcccc	ggggcctggg	acaagacaca	2820
acctgcacct	ttattgcctg	ggacatcaac	cagccaagta	acgggtcatg	ggggcgagtg	2880
caaggacaga	gacctccagc	aactgggtgg	ttctgatctc	ctgggggtgg	gagggtcttc	2940
tggagtagcc	agaggtggag	gaggatttgt	cgccagtttc	tggatggagg	tgctggcact	3000
tttagctgag	gaaaatatgc	agacacagag	cacatttggg	gacctgggac	cagttcagca	3060
gaggcagcgt	gtgtgcgcgt	gcgtgtgcgt	gtgtgtgcgt	gtgtgtgtgt	acgcttgcat	3120
ttgtgtcggg	tgggtaagga	gatagagatg	ggcgggcagt	aggcccaggt	cccgaaggcc	3180
ttgaaccac	tggtttggag	tctcctaagg	gcaatggggg	ccattgagaa	gtctgaacag	3240
ggctgtgtct	gaatgtgagg	tctagaagga	tcctccagag	aagccagctc	taaagctttt	3300
gcaatcatct	ggtgagagaa	cccagcaagg	atggacaggc	agaatggaat	agagatgagt	3360
tggcagctga	agtggacagg	atttggtact	agcctggttg	tggggagcaa	gcagaggaga	3420
atctgggact	ctgggtgtct	gcctggggca	gacgggggtg	tctcaggggc	tgggagggat	3480
gagagtagga	tgatacatgg	tggtgtcttg	caggaggcgg	gcaaggatga	ctatgtgaag	3540
gcaactgccc	ggcaactgaa	gcctttttgag	accctgctgt	cccagaacca	gggaggcaag	3600
accttcattg	tgggagacca	ggtgagcatc	tggcccatg	ctgttccttc	ctcgccaccc	3660
tctgcttcca	gatggacaca	ggtgtgagcc	atttgtttag	caaagcagag	cagacctagg	3720
ggatgggctt	aggccctctg	cccccaattc	ctccagcctg	ctcccgtctg	ctgagtcctt	3780

agccccctg ccctgcagat ctcttcgct gactacaacc tgctggactt gctgctgac	3840
catgaggtec tagccccctgg ctgcctggat gcgttcccc tgctctcagc atatgtgggg	3900
cgcttcagtg cccggcccaa gctcaaggcc ttcttggcct ccctgagta cgtgaacctc	3960
cccatcaatg gcaacgggaa acagtgaggg ttgggggggac tctgagcggg aggcagagtt	4020
tgcttcctt tctccaggac caataaaatt tctaagagag ctactatgag cactgtgttt	4080
cctgggacgg ggcttagggg ttctcagcct cgaggtcggt gggagggcag agcagaggac	4140
tagaaaacag ctctccagc acagtcagtg gcttcctgga gccctcagcc tggctgtgtt	4200
tactgaacct cacaaactag aagaggaaga aaaaaaaga gagagagaaa caaagagaaa	4260
ta	4262